

CLAIMS

1. A pre-formed tooth insert for insertion in a prepared cavity in a tooth, wherein
- 5 a. said insert has at least one surface (1) that remains exposed when the insert is placed in the prepared cavity,
- 10 b. said insert has a contact surface (5) in continuation of the exposed surface(s) (1), which contact surface comes in contact with the inner surface of the prepared tooth cavity when the insert is placed in the cavity, said contact surface forming substantially vertical edges at the junction with said exposed surface,
- 15 c. each of said substantially vertical edges having an inclination or groove (2) along at least a portion of the edge such that when said insert is placed in said cavity the inclination or groove (2) is located at the junction between the exposed surface and an adjacent outer surface of the tooth, allowing insertion of a shapable resin material to form essentially a continuous surface.
2. The insert of claim 1, wherein said exposed surface comprises a surface selected from the group consisting of a proximal, mesial, proximal distal, facial and lingual surface of a tooth.
- 20 3. The insert of claim 1, which is adapted to fit a prepared proximal cavity in a tooth, such that when in place the exposed surface (1) forms part of a proximal surface of the tooth.
- 25 4. The insert of claim 1, which is adapted to fit a prepared cavity in a tooth, said cavity extending to at least two outer surfaces of said tooth, selected from the group consisting of proximal, lingual and/or facial surfaces.
- 30 5. The insert of claim 1, wherein the inclinations (2) extend from the bottom surface (11) of the insert to a height (3) such that the inclinations (2) reach substantially the occlusal embrasure.
- 35 6. The insert of claim 1 further comprising an inclination (8) along the vertical bottom edge of the exposed surface (1).
7. The insert of claim 1 having an anchor part (13) opposite the exposed surface (1), the anchor part being wider than the center part (14) of the insert.
- 40 8. The insert of claim 1, wherein the height of the insert is in the range of about 3 mm to about 10mm.

9. The insert of claim 1, wherein the occlusal width of the insert is in the range of about 2 mm to about 10mm.
- 5 10. The insert of claim 3, wherein at least one and preferably both of the facial and lingual sides of the insert diverges from the tooth axis such that the exposed surface is wider at its occlusal end than its gingival end.
- 10 11. The insert of claim 10 wherein at least one and preferably both of the facial and lingual sides of the insert diverges from the tooth axis by an angle in the range of about 1° to about 10°, and preferably of about 2° to about 7°.
- 15 12. The insert of claim 1 wherein the insert is adapted to fit into at least one groove located on a surface of the prepared cavity, which groove lies in a substantially vertical plane.
13. The insert of claim 12, wherein the insert is adapted to fit into two grooves facing each other on opposite sides of the prepared cavity.
- 20 14. The insert of claim 1, wherein the insert is adapted to fit into a groove located on the gingival floor of said cavity.
15. The insert in claim 14, wherein the groove located on the gingival floor extends between the gingival endpoints of two opposite substantially vertical grooves.
- 25 16. A method of repairing a tooth by use of an insert of any of claims 1 to 15 comprising:
- 30 a. selecting an insert that is suitable for the size and location of decayed tooth tissue that needs repair,
- b. shaping a cavity into which the selected insert will fit,
- 35 c. applying a dental adhesive to the inner surface of said cavity,
- d. placing said insert in said cavity,
- e. applying a shapable cement material into the inclinations or grooves located on the interfaces between said insert and the prepared cavity,
- 40 f. shaping said resin material so as to form a continuous outer surface of said tooth with insert,
- g. allowing the resin material to harden,
- h. finishing parts of the insert that extend out of the prepared cavity to thereby having a placed and secured insert in said tooth.